

Appl. No. 10/099,663
Reply to Office action of June 1, 2006

Amendment to the Title:

Please amend the title of the application as follows:

~~Gut Specific Gene Expression in Transgenic Avians~~

Avian iFABP Gene Expression Controlling Region

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Amendments to the Specification

Please replace the paragraph beginning at page 2, line 4, with the following rewritten paragraph:

A large number of promoters suitable for controlling the expression of foreign genes are known. For example, one of the most frequently used promoters, the cytomegalovirus immediate-early promoter, is described in U.S. Patent No. 5,168,062 ~~5,163,062~~ to Stinski. Because the CMV promoter provides for constitutive expression, a gene product under its regulation is expressed in most, if not all tissues.

Please replace the paragraph beginning at page 3, line 3, with the following rewritten paragraph:

By placing the gene coding for an antimicrobial peptide under the control of a gut-specific ~~promoter promoter~~, undesired side-effects associated with expressing the antimicrobial protein in a ~~ubiquitous~~ ~~ubiquitous~~ fashion can be minimized. In addition, a promoter capable of gut-specific expression would be useful when operably linked to other genes, especially those encoding proteins optimally localized to the gastrointestinal tract.

Please replace the paragraph beginning at page 28, line 20, with the following rewritten paragraph:

Yet another aspect of the present invention is a eukaryotic cell transformed with an expression vector according to the present invention and described above. In one embodiment of the present invention, the transformed cell is a chicken gut-specific cell and the nucleic acid insert comprises the avian iFABP gene expression control region, a nucleic acid insert encoding an avian codon optimized polypeptide for ~~polypeptidefor~~ expression in an avian cell, and an SV40 polyadenylation sequence.

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Please replace the paragraph beginning at page 39, line 11, with the following rewritten paragraph:

Prior to the transfection study, cells were inoculated into 24 well plates at appropriate densities and cultured for 24 hrs to obtain 50% confluent cultures (CaCo2 cells were at 8×10^4 cells/well, IEC6 cell were at 6×10^4 cells/well, and MCF10A cells were at 2×10^4 cells/well). Subsequently cells were transferred to fresh media, with the CaCo2 cells being placed in media containing 20% FBS. Transfection and reporter assays were performed using Fugene 6 (Roche) and Dual Luciferase Reporter Assay (Promega) kits. After incubation of the cells for ~~from~~ about 1 to about 2 hrs, the mixture of Fugene 6 (Roche) and DNA (0.25 μ g/well) was applied to the cells. The cells were incubated with DNA for 48 hrs and harvested according to the manufacturer's protocol. The reporter activity data was calculated as the ratio of firefly luciferase:R. luciferase.